STRUCTURE OF TURNING CONTROL ON A WHEEL

BACKGROUND OF THE INVENTION

(a) Field of the Invention

The invention relates to a turning control structure on a wheel, a structure that makes a wheel swing left-and-right to control turning.

(b) Description of the Prior Art

Wheels on a cart usually have an axis in the center fixed to the cart so a user must control turning with his own body posture when the cart is moving, very cumbersome. The user may lose patience and give up, lowering interest in exercise.

SUMMARY OF INVENTION

The goal of the invention is to provide a turning control structure on a wheel to make direction control easier, convenient, and more nimble.

The invention consists of a pair of symmetrical outer shells. Inside the shell is a circular trough in the center. Extending from the circular trough are two arched troughs. Outside of the shell are a plurality of L-shaped latches. Place a fixing axis with symmetrical protrusions between the two outer shells. Place a U-shaped spring pin in the circular trough of the outer shell so the spring pushes against the

protrusion. After the shell is placed in the center of a wheel, the wheel, by the synchronous actions of the protrusions within the arched troughs and the spring pin, will swing left-and-right when in motion.

The invention has two protective rings. The rings have protruding pipes. Inside the protruding pipes are corresponding latches for the L-shaped latches on the outer shell to position on both sides of a wheel. Rubber rings around the protective rings protect the outer shell from dirt.

To enable a further understanding of the said objectives and the technological methods of the invention herein, the brief description of the drawings below is followed by the detailed description of the preferred embodiment.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 shows a perspective view of the entire structural combination according to the invention.

Fig. 2 shows a perspective exploded view of the entire structural combination according to the invention.

Fig. 3 shows a cross-sectional schematic view of the completely assembled unit according to the invention.

Fig. 4 shows a schematic view of the invention in use.

Fig. 5 shows another schematic view of the invention in use.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to Figs. 1~3, the invention consists of two outer shells (1), a circular trough(11) in a center of the outer shell(1). Extending from the circular trough (11)are two arched troughs(12). The outer surface of the outer shell (1) is round. On the two sides of the outer surface are L-shaped latches (13) .

A fixing axis (2) is placed inside the two outer shells (1) . Inside the fixing axis (2) is a horizontal hole (21) . Outside of the fixing axis (2) has protrusions (22) . Two U-shaped spring pins (3) are configured in the circular troughs (11) of the outer shells (1) . Snap the two outer shells (1) together to include the fixing axis (2) so that the protrusions (22) are in the arched troughs (12) and held in place by the spring pin (3) .

Two protective rings (4) have closing parts (41) and protruding pipes(42). The protruding pipes(42) have centric holes(43). Inside the centric holes (43) are corresponding latches (44) for the L-shaped latches (13) on the outer shells (1) .

Combining the aforesaid parts, the outer shells(1) are placed in the center(51) of a wheel(5). Place the protective rings (4) on both sides of the outer shells(1) and snap together the corresponding latches(44)

and the L-shaped latches (13). Place a rubber ring (6) around the closing part (41) of the protective ring (4), rendering the outer shells (1) air-tight from dirt. When the wheel (5) is in motion, the arched troughs (12) can swing around the protrusions (22) of the fixing axis and held in place by the spring pins (3) so that the wheel (5) moves left-and-right for turning control.

In conclusion, the invention, structure of turning control on a wheel, utilizing outer shells with a fixing axis to achieve easy direction control on a wheel is of a practical design and innovative invention. The application is in accord with the laws set forth. Swift review of the application and grant of a patent will be greatly appreciated.

It is of course to be understood that the embodiment described herein is merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the claims.